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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/963,978	09/26/2001	A. John Speranza	PES-0041	1532

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EXAMINER

SCALTRITO, DONALD V

ART UNIT	PAPER NUMBER
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1746

DATE MAILED: 08/29/2003

8

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/963,978

Applicant(s)

SPERANZA ET AL.

Examiner

Donald V Scaltrito

Art Unit

1746

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 September 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 8-12, 14, 16-19, 23, 24 and 26-28 is/are rejected.
- 7) ☒ Claim(s) 7, 13, 15, 20-22 and 25 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 November 2001 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6. 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 & 3-5 are rejected under 35 U.S.C. 102(b) as being anticipated by Roy et al. (U.S. Patent No. 5,942,350).

Roy et al. disclose a graded metal hardware component for an electrochemical cell is shown for mechanically supporting electrochemical cell structures and defining fluid cavities and fluid passages in a cell employing a solid polymer electrolyte membrane. The graded metal hardware component includes a substrate such as stainless steel, a surface layer made of a precious metal and a graded boundary layer adjacent to and between the substrate and surface layer (note abstract).

With respect to Claim 1, Roy et al. disclose a membrane disposed between two electrodes wherein the membrane comprises a substrate that is contiguously disposed to a frame (see column 5, lines 9-39; see also Figures 1 & 2 of this reference). With respect to Claims 3 & 4, Roy et al. disclose a screen, which the Examiner interprets as a porous planar member (Figure 2). With respect to Claim 5, Roy et al. disclose that the substrate is disposed between two halves of a frame (Figure 2).

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-6, 8-12, 14, 16-19, 23, 24, 27 & 28 are rejected under 35 U.S.C. 102(e) as being anticipated by Andrews et al. (U.S. Patent No. 6,427,639).

Andrews. et al. disclose a method and apparatus for chemically heating one or more components of, or intake air flowing to, an internal combustion engine by feeding hydrogen to a catalyst. The invention also provides a method and apparatus for reducing pollutants commonly occurring during cold start-up of combustion engines by heating components of, or intake air flowing to, a combustion engine, in order to quickly warm the engine and its catalytic converter to operating temperatures (note abstract).

With respect to Claim 1, Andrews et al. disclose a proton exchange membrane electrolyzer comprising a proton exchange membrane disposed between an anode and a cathode wherein a substrate is disposed contiguously at a frame (see column 6, lines 3-58 of this reference; see also Figure 2). With respect to Claim 2, Andrews et al. disclose a proton exchange material. With respect to Claims 3 & 4, Andrews et al. disclose a substrate that is a screen, which the Examiner also interprets as a planar porous member. With respect to Claim 5, Andrews et al. disclose a second frame between which the substrate is disposed (Figure 2). With respect to Claim 6, Andrews et al. disclose a flow field support member (Figure 2).

With respect to Claim 8, Andrews et al. disclose a frame and a substrate in contiguous contact with the frame having a proton exchange material disposed thereon (column 6, lines 3-58

Art Unit: 1746

of this reference; Figure 2). With respect to Claims 9 & 10, Andrews et al. disclose a substrate that is a screen, which the Examiner also interprets as a planar porous member. With respect to Claims 11 & 12, Andrews et al. disclose that the substrate is made of Ti 40-3/32 and that proton exchange material is incorporated therein (column 6, lines 3-20). With respect to Claim 14, Andrews et al. disclose that the frame extrudes into a peripheral surface of the substrate (Figure 2). With respect to Claim 16, Andrews et al. disclose using titanium as a material to fabricate the substrate (column 6, lines 15-18). With respect to Claim 17, Andrews et al. disclose that the frame can be made of a carbon fiber filled Teflon sheet and metal oxides (column 6, lines 8-13).

With respect to Claim 18, Andrews et al. disclose a frame in contiguous contact with a plate that comprises a number of flow ports (Figure 2, column 6, lines 11-13). With respect to Claim 23, Andrews et al. disclose that the frame extrudes into a peripheral surface of the substrate (Figure 2). With respect to Claim 24, Andrews et al. disclose a frame and a support surface in contiguous contact with the frame (Figure 2). With respect to Claim 27, Andrews et al. disclose an electrochemical cell comprising a membrane disposed two electrodes wherein the membrane has an integrated proton exchange material and a substrate in contiguous contact with a frame. Andrews et al. also disclose a plurality of fluid flow fields disposed throughout (Figure 2). With respect to Claim 28, Andrews et al. disclose that the proton exchange material can be made of the claimed materials (column 6, lines 3-58).

It is noted that Claim 19 is a product-by-process claim. "Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art,

Art Unit: 1746

the claim is unpatentable even though the prior product was made by a different process.” In re Thorpe, 777 F. 2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985). Since Andrews et al. disclose a frame in contiguous contact with a plate that comprises a number of flow ports that are similar to the Applicant’s, the Applicant’s process is not given patentable weight in the claim.

Allowable Subject Matter

Claims 7, 13, 15, 20-22 & 25 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The following is a statement of reasons for the indication of allowable subject matter: The prior art of record fails to teach or fairly suggest a cooling plate disposed adjacent to first electrode wherein the cooling plate is in contiguous contact with a third frame. The prior art of record fails to teach or fairly suggest melting a frame into a peripheral surface of a substrate to obtain contiguous contact. The prior art of record fails to teach or fairly suggest a channel disposed on a cooling plate wherein the channel is arranged in a spiral pattern or a continuous parallel configuration.

Conclusion

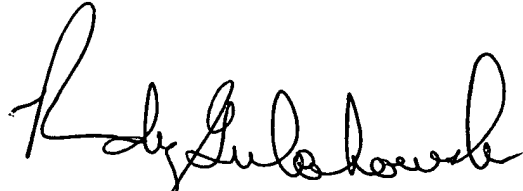
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Donald Scaltrito, whose telephone number is 703.305.4926. The examiner can be reached in his office on Monday-Friday between the hours of 9am to 6pm.

Art Unit: 1746

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski, may be reached at 703.308.4333. The official fax number for the organization where this application or proceeding is assigned is 703.872.9310.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703.305.0661

Donald Scaltrito
Patent Examiner
Art Unit 1746
August 13, 2003



RANDY GULAKOWSKI
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